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Remarks/Arguments

This amendment is responsive to the non-final office action mailed May 6, 2004 in the above-identified application. Reconsideration is respectfully requested.

Claims 1, 3-5, 8-9, 11, 13, 16 and 17 remain in this application. Claims 2, 6, 7, 10, 12, 14 and 15 are canceled. Independent Claim 1 is amended to incorporate the limitations from dependent claim 2. Claim 5 is amended to make it an independent claim. Claim 9 is amended to incorporate limitations from dependent claim 10. Claims 16 and 17 are amended to correspond to amended claims 1 and 9, respectively. For the reasons given below, all of the claims are believed to be allowable over the cited prior art.

Rejection of Claims 1-17 under 102(b)

Claims 1 -17 are rejected under 35 USC §102(b) as being anticipated by US Patent No. 5,731,823 to Miller et al. This rejection is respectfully traversed.

The present invention describes systems and methods that analyze one or more criteria to select a print quality setting. In one embodiment, print quality selection logic 152 automatically selects one of a plurality of print quality settings based on data relating to document content, prior print setting selections, user input and/or one or more characteristics relating to the print request.

The cited reference to Miller et al. discloses a method of optimizing the controllable parameters related to producing printed material on a hardcopy output device. An object of the invention disclosed in Miller et al. is to provide a method and hardcopy print device that discriminates between various types of printed images, such as textual, grayscale only, color graphic and photographic images, and which selects black and color inks in mixtures to yield a preferred color reproduction which is pleasing to the eye. (See Col. 2, lines 31-36) Another object of the invention disclosed in Miller et al. is to provide an improved method of balancing the color requirements for different components of a selected image on a component by component basis, using computer software with minimal operator input. (See Col. 2, lines 39-41)

Independent Claim 1 is amended to incorporate the limitations of dependent Claim 2. Specifically, Claim 1 now recites a method of selecting one of a plurality of print settings

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comprising the steps of counting a number of pages in the document, selecting a first print setting from the plurality of print settings if the number of pages is less than or equal to a threshold, selecting a second print setting from the plurality of print settings if the number of pages is greater than the threshold, and utilizing the selected print setting to print the document.

On page 2 of the present Office Action and regarding Claim 2, the Examiner states that "Miller further discloses...the steps of: counting a number of pages in the document (accumulation of pages, col. 5, lines 33-42 and col. 7, lines 7-13); if the number of pages is less than or equal to a threshold, then selecting a first print setting (applying the best print settings for accumulated data, cols. 7-8); and if the number of pages is greater than the threshold, then selecting a second print setting (applying the best print settings for accumulated data, cols. 7-8)."

Applicant respectfully disagrees. The portions of Miller cited by the Examiner do not disclose or teach the steps of counting a number of pages in the document, or selecting a print setting based on comparing the number of pages to a threshold. Col. 5, lines 33-42 of Miller et al. refer to a page description signal 58, a rasterizing page description step 60 and a data stream signal 62 output of the rasterizing step 60 that may be accumulated as rasterized page image data 64. Col. 7, lines 7-13 of Miller et al. refers to a situation of printing one or a sequence of plural hardcopy pages, a step 80 that may also collect statistics for each page as a whole, such as the number of elements, or the number of color elements on each page, and an output signal 82 that carries the characterized data output of step 80 for accumulation as first characterization data 84. Similarly, the remainder of Col. 7 and Col. 8 of Miller et al. do not disclose or teach the steps recited in amended Claim 1. Applicant submits that nowhere in these or any other portions of Miller et al. is disclosed the limitations of the method in amended Claim 1. Therefore, the rejection of Claim 1 is improper and should be withdrawn.

Amended Claim 3 depends from Claim 1 and is allowable for the same reasons as explained for Claim 1. Additionally with respect to Claim 3, on page 3 of the Office Action the Examiner asserts that "Miller further discloses...determining an amount of text data ("text data 44" in document 42, fig. 2) in the document; and selecting the optimum setting based on the amount of text data (applying the best print settings for an amount of text data, cols. 5-8)." Applicant submits that these portions of Miller et al. cited by the Examiner do not disclose the steps recited in amended Claim 3 of determining an amount of text data in the document, and

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selecting the optimum print setting based on the amount of text data and the number of pages in the document. Therefore, Claim 3 is allowable for this additional reason.

Amended Claim 4 depends from Claim 1 and is allowable for the same reasons as explained for Claim 1. Additionally with respect to Claim 4, on page 3 of the Office Action the Examiner asserts that "Miller further discloses...determining an amount of image data in the document ("image data 48" in document 42, fig. 2) in the document; and selecting the optimum print setting based on the amount of image data (applying the best print settings for image data, cols. 5-8)." Applicant submits that these portions of Miller et al. cited by the Examiner do not disclose the steps recited in amended Claim 4 of determining an amount of image data in the document, and selecting the optimum print setting based on the amount of image data and the number of pages in the document. Therefore, Claim 4 is allowable for this additional reason.

Amended Claim 5 is recast in independent form to recite the steps of comparing an amount of text data in the document and an amount of image data in the document, selecting an optimum print setting from the plurality of print settings based on the amount of text data as compared to the amount of image data in the document, and utilizing the optimum print setting to print the document. On page 3 of the Office Action and regarding Claim 5, the Examiner asserts that Miller et al. discloses these steps and the Examiner refers to "(a document comprising both text and image data, fig. 2)" and "(applying the best print settings for both text and image data, cols. 5-8)" in Miller et al.

Applicant respectfully disagrees. The portions of Miller cited by the Examiner do not disclose or teach the steps of comparing an amount of text data in the document and an amount of image data in the document, and selecting an optimum print setting from the plurality of print settings based on the amount of text data as compared to the amount of image data in the document. Figure 2 is simply a drawing of a hardcopy output having textual, grayscale only, color graphic and photographic image components. Cols. 5-8 in Miller et al. do not disclose or teach the steps claimed in Claim 5. Therefore, the rejection of Claim 5 is improper and should be withdrawn.

Claim 8 recites the steps of gathering data relating to prior print setting selections, comparing the prior print setting selection data to at least one characteristic of the print request, identifying an optimum print setting for the print request; and utilizing the optimum

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print setting to print the document. On page 4 of the Office Action, the Examiner asserts that Miller et al. discloses the steps recited in Claim 8.

Applicant respectfully disagrees. Regarding the step of gathering data relating to prior print setting selections, the Examiner references in regards to Miller et al. "(determining the characteristics of the document to be printed, fig. 2, col. 3, lines 35-50 and col. 6, lines 25-62)". However, these sections of Miller et al. do not disclose or teach gathering data relating to prior print setting selections as claimed in Claim 8. Regarding the step of comparing the prior print setting selection data to at least one characteristic of the print request, the Examiner references in regards to Miller et al. "(the system identifies the characteristics of the document and select (sic) the best print settings based on the characteristic of the document with respect to printer's attributes/properties, Abstract, col. 2, lines 3-38 and col. 7, lines 35-67 to col. 8, lines 1-67)." However, these sections of Miller et al. do not disclose or teach comparing prior print setting selection data to at least one characteristic of the print request as claimed in Claim 8. Therefore, the rejection of Claim 8 is improper and should be withdrawn.

Claim 9 is amended to incorporate limitations from canceled Claim 10. Amended Claim 9 now recites the step of analyzing a plurality of characteristics relating to the print request, the plurality of characteristics including an input/output protocol, a host device type, an application being used to print the document, a job queue status, and a time of day. On page 5 of the Office Action regarding Claim 10, the Examiner asserts that Miller et al. discloses the method of claim 9 and the additional limitations added by Claim 10. Applicant respectfully disagrees. In the Office Action on page 5, the paragraph addressing Claim 10 contains only one citation to Miller et al. – "(i.e. color of text data, col. 6, lines 25-52)." However, this portion of Miller et al. does not disclose or teach the step of analyzing a plurality of characteristics that relate to the print request, where those characteristics include an input/output protocol, a host device type, an application being used to print the document, a job queue status and a time of day. Therefore, the rejection of amended Claim 9 is improper and should be withdrawn.

Claim 11 depends from Claim 9 and is allowable for the same reasons as explained for Claim 9. Additionally, on page 5 of the Office Action regarding Claim 11, the Examiner asserts that "Miller further discloses...gathering data relating to prior print settings selection (col. 6, lines 25-52);". Applicant respectfully disagrees and notes that these portions of Miller et al. cited by the Examiner do not disclose the step recited in Claim 11 of gathering data relating to prior print setting selections. Therefore, Claim 11 is allowable for this additional reason.

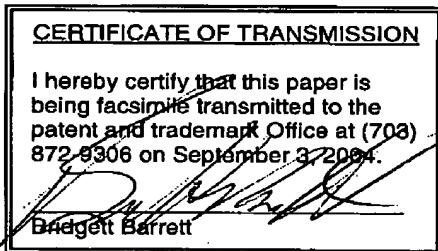
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Claim 13 depends from Claim 9 and is allowable for the same reasons as explained for Claim 9. Additionally, on page 5 of the Office Action regarding Claim 13, the Examiner asserts that "Miller further discloses...the step of weighting each of the plurality of characteristics according to at least one factor (i.e. color of image data, col. 3, lines 35-50);". Applicant respectfully disagrees and notes that these portions of Miller et al. cited by the Examiner do not disclose the step recited in Claim 13 of weighting each of the plurality of characteristics according to at least one factor.

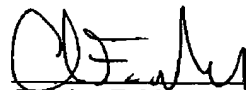
Claims 16 and 17 are amended to correspond to amended Claims 1 and 9, respectively. Accordingly, Claims 16 and 17 are allowable for the same reasons as explained above for Claims 1 and 9.

Conclusion

In view of the foregoing, applicants submit that all of the currently pending claims 1, 3-5, 8-9, 11, 13, 16 and 17 are in condition for allowance and a notification to that effect is respectfully requested. If the Examiner has any questions, he is invited to contact Applicant's attorney at the below-listed telephone number.



Respectfully submitted,



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